



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,680	01/26/2004	Osamu Mizuno	MTS-3287US1	3678
23122	7590	09/09/2004	EXAMINER	
RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980			MAGEE, CHRISTOPHER R	
			ART UNIT	PAPER NUMBER
			2653	
DATE MAILED: 09/09/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/764,680

Applicant(s)

MIZUNO ET AL.

Examiner

Christopher R. Magee

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 6-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/26/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/979,242 (US 6,731,587), filed on 02/22/2002.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Stovall et al. (hereinafter Stovall) (US 6,404,706 B1).

- Regarding claim 7, Stovall Regarding claims 1 and 7, Stovall discloses a transducer supporting structure comprising:

a transducer 35 for recording and reproducing information to and from a medium 14;

a transducer mounting section 40 mounted with said transducer 35 and configured to contact said medium 14 by means of mechanical action or to maintain a fixed distance from said medium (col. 1, lines 33-45; Fig. 1);

Art Unit: 2653

a suspension 33 which supports said transducer mounting section 40 and elastically positions said transducer 35 in a direction such as to move said transducer to and from said medium (Fig. 1); and

heat-dissipating means formed integrally with said transducer and providing connection between said transducer and said transducer-mounting section (col. 2, lines 61 to col. 3, line 3).

- Regarding claim 8, Stovall discloses the transducer 35 is an electromagnetic transducer (col. 1, lines 20-24).
- Regarding claim 9, Stovall discloses the transducer 35 is an electro-optical transducer (col. 1, lines 20-24).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stovall et al. (hereinafter Stovall) (US 6,404,706 B1) in view of Ali et al. (hereinafter Ali) (US 6,362,966 B1).

- Regarding claim 6, Stovall discloses a transducer supporting structure comprising:
 - a transducer 35 for recording and reproducing information to and from a medium 14;
 - a transducer mounting section 40 mounted with said transducer 35 and configured to contact said medium 14 by means of mechanical action or to maintain a fixed distance from said medium (Fig. 1);

Art Unit: 2653

a suspension 33 which supports said transducer mounting section 40 and elastically positions said transducer 35 in a direction such as to move said transducer to and from said medium (col. 1, lines 33-45; Fig. 1); and

a thermal coupling member 95 extending between said transducer 35 and said transducer mounting section 40, said thermal coupling member 95 being formed of a part of said suspension 33 for thermally coupling said transducer with said suspension and being in direct contact with said transducer 35 (Fig. 5), wherein

at least a part of heat generated in said transducer is dissipated through said suspension (col. 2, lines 61 to col. 3, line 3).

Stovall does not teach the thermal coupling member and the transducer or thermal coupling member and the suspension being coupled thermally with each other via a gel form substance.

Ali teaches the use of a polymer-based gel for thermal coupling between electronic components (col. 3, lines 19-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the thermal coupling member of Stovall with a gel form substance as taught by Ali.

The rationale is as follows: One of ordinary skill in the art at the time of the invention would have been motivated to replace the thermal coupling member of Stovall with a gel form substance as taught by Ali because the gel form substance, which has high heat conductivity, is sufficiently compliant to allow for varying heights along the slider base that connects to the suspension (Ali; col. 3, lines 25-31).


Art Unit: 2653

Conclusion


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Magee whose telephone number is (703) 605-4256. The examiner can normally be reached on M-F, 8: 00 am-5: 30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Christopher R. Magee
Patent Examiner
Art Unit 2653

September 7, 2004


GEORGE J. LETSCHER
PRIMARY EXAMINER